

Amendments to the Specification

On page 8, line 11, paragraph beginning thereat:

a position corresponding to position 4 in the motif sequence 1L: H-A-E-F-T-P-V-F-S (SEQ ID NO 44) or a position corresponding to position 4 in the motif sequence 1H: A-A-Q-Y-S-P-H-F-S (SEQ ID NO: 45);

a position corresponding to position 4 in the motif sequence 2: A-L-G-N-G-G-L-G (SEQ ID NO: 46); and

a position corresponding to position 7 in the motif sequence 3L: R-I-V-K-F-I-T-D-V (SEQ ID NO: 47) or a position corresponding to position 7 in the motif sequence 3H: R-I-V-K-L-V-N-D-V (SEQ ID NO: 48); and wherein

On page 13, line 33, paragraph beginning thereat:

a position corresponding to position 4 in the motif sequence 1L: H-A-E-F-T-P-V-F-S (SEQ ID NO 44) or a position corresponding to position 4 in the motif sequence 1H: H-A-Q-Y-S-P-H-F-S (SEQ ID NO: 45);

a position corresponding to position 4 in the motif sequence 2: A-L-G-N-G-G-L-G (SEQ ID NO: 46); and

a position corresponding to position 7 in the motif sequence 3L: R-I-V-K-F-I-T-D-V (SEQ ID NO: 47) or a position corresponding to position 7 in the motif sequence 3H: R-I-V-K-L-V-N-D-V (SEQ ID NO: 48); and wherein

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On page 16, line ²³~~24~~, paragraph beginning thereat:

a position corresponding to position 4 in the motif sequence 1L: H-A-E-F-T-P-V-F-S (SEQ ID NO 44) or a position corresponding to position 4 in the motif sequence 1H: H-A-Q-Y-S-P-H-F-S (SEQ ID NO: 45);

a position corresponding to position 4 in the motif sequence 2: A-L-G-N-G-G-L-G (SEQ ID NO: 46); and

a position corresponding to position 7 in the motif sequence 3L: R-I-V-K-F-I-T-D-V (SEQ ID NO: 47) or a position corresponding to position 7 in the motif sequence 3H: R-I-V-K-L-V-N-D-V (SEQ ID NO: 48);

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On page 26, line ¹~~2~~, paragraph beginning thereat:

a position corresponding to position 4 in the motif sequence 1L: H-A-E-F-T-P-V-F-S (SEQ ID NO 44) or a position corresponding to position 4 in the motif sequence 1H: H-A-Q-Y-S-P-H-F-S (SEQ ID NO: 45);

a position corresponding to position 4 in the motif sequence 2: A-L-G-N-G-G-L-G (SEQ ID NO: 46); and

a position corresponding to position 7 in the motif sequence 3L: R-I-V-K-F-I-T-D-V (SEQ ID NO: 47) or a position corresponding to position 7 in the motif sequence 3H: R-I-V-K-L-V-N-D-V (SEQ ID NO: 48) can be obtained.

On page 46, line 12, paragraph beginning thereat:

The present inventors found out that, by substituting an amino acid residue at a particular position in the amino acid sequence of a natural α -glucan phosphorylase derived from a plant, with another amino acid residue, the thermostability of the resulting α -glucan phosphorylase is improved. Such a particular position can be determined by aligning any of the following motif sequences, or the amino acid sequence of SEQ ID NO: 2, and a comparison subject amino acid sequence:

motif sequence 1L: H-A-E-F-T-P-V-F-S (SEQ ID NO: 44) or a motif sequence 1H: H-A-Q-Y-S-P-H-F-S (SEQ ID NO: 45),

motif sequence 2: A-L-G-N-G-G-L-G (~~SEW~~ SEQ ID NO: 46), and

motif sequence 3L: R-I-V-K-F-I-T-D-V (SEQ ID NO: 47) or motif sequence 3H: R-I-V-K-L-V-N-D-V (SEQ ID NO: 48).